REMARKS/ARGUMENTS

The Office Action mailed October 4, 2005, has been received and reviewed. Claims 1 through 39 are currently pending in the application. Claims 18 through 34 have been withdrawn from consideration as being drawn to a non-elected invention and have been canceled herein. Claims 1 through 17 and 35 through 39 stand rejected. Applicants respectfully request reconsideration of the application in view of the following arguments.

Information Disclosure Statement(s)

Applicants note the filing of an Information Disclosure Statement herein on January 23, 2004 and note that the two references cited under "Other Documents" on page 1 of the Form PTO-1449 have not been initialed by the Examiner. Applicants respectfully request that all information cited on the PTO-1449 be made of record herein. Applicants further request that another page 1, showing all references initialed by the Examiner, be sent to Applicants' counsel with the next Office Action.

Should any of the documents, or portions thereof, be unavailable to the Examiner for any reason, please contact the undersigned attorney, who will supply same immediately by facsimile or other suitable method of delivery.

Double Patenting Rejection Based on U.S. Patent No. 6,776,049

Claims 1 through 17 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 through 40 of U.S. Patent No. 6,776,049. In order to avoid further expenses and time delay, Applicants elect to expedite the prosecution of the present application by filing a terminal disclaimer to obviate the double patenting rejections in compliance with 37 CFR §1.321 (b) and (c). Applicants' filing of the terminal disclaimer should not be construed as acquiescence in the Examiner's double patenting or obviousness-type double patenting rejections. Attached are the terminal disclaimer and accompanying fee.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on U.S. Patent No. 4,763,531 to Dietrich, *et al.*

Claims 35 through 39 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Dietrich, *et al.*, U.S. Patent No. 4,763,531 (hereinafter "Dietrich"). Applicants respectfully traverse this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Dietrich discloses a force-torque sensor that includes two identical wheels 10, 10'. Col. 4, lines 16-23; FIG. 1. Each wheel 10, 10' has an outer ring 12, 12' and a central hub 11, 11' that are attached by four spokes 14 to 17 (14' to 17'). Col. 4, lines 23-28; FIG. 1. "Wire strain gauges 20a and 20b (20'a and 20'b) are mounted on all surfaces 14a to 17b (14'a to 17'b) of corresponding spokes 14 to 17 (14' to 17')." Col. 4, lines 62-65; FIG. 1. "Another pair of wire strain gauges 20c and 20d is mounted on lateral surfaces 15c, 15d and 16c, 16d of diagonal pair of spokes 15 and 16 of the top wheel 10." Col. 5, lines 7-10; FIG. 1. Screw bolts (not shown) are used to join wheels 10, 10', countersunk holes 18 accommodating the screw bolts that thread into female-threaded bores 19'. Col. 4, lines 44-61; FIG. 1. The wheels may also be joined with a screw bolt (not shown) through a bore 11a and a female threaded bore 11'a. Col. 5, lines 22-24; FIG. 1.

Dietrich, however, fails to set forth each and every element, either expressly or inherently, as may be found in independent claim 35. Among others, Dietrich fails to anticipate disposing a stress sensor at the *interface* between the first and second mated bodies. Rather, Dietrich discloses sensors disposed upon the spokes 14 to 17 (14' to 17'). Col. 4, lines 62-65; FIG. 1. Therefore, Dietrich fails to anticipate each and every element of independent claim 35. Because Dietrich fails to anticipate independent claim 35, the withdrawal of the 35 U.S.C. § 102(b) rejection of claim 35 is respectfully requested.

The withdrawal of the 35 U.S.C. § 102(b) rejection of claims 36-39 is respectfully requested as each of these claims depends either directly or indirectly from allowable independent claim 35.

Claim 36 is additionally allowable because Dietrich fails to anticipate determining the shear component of the stress, among others.

Claim 38 is additionally allowable because Dietrich fails to anticipate determining the shear component of the stress substantially exclusive of the normal component of the stress, among others.

Claim 39 is additionally allowable because Dietrich fails to anticipate disposing a plurality of the stress sensors at the interface between the first and second mated bodies, as discussed above.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent No. 4,763,531 to Dietrich, *et al.*, in View of U.S. Patent No. 4,692,610 to Szuchy

Claim 37 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Dietrich in view of Szuchy, U.S. Patent No. 4,692,610 (hereinafter "Szuchy"). Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The 35 U.S.C. § 103(a) obviousness rejection of claim 37 is improper because claim 37 depends indirectly from allowable independent claim 35, as set forth above.

In addition, one skilled in the art would not have a motive to combine the references because Dietrich relies on a different principle of operation than Szuchy. Dietrich employs wire strain gauges and the voltages received from such gauges to measure strain. Dietrich, Col. 3, lines 28-44. Szuchy, conversely, relies on an optical strain measurement system and the attenuation in the light signal passing through a fiber. Szuchy, Col. 1, lines 65-68; Col. 2, lines 64-66. "If a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959); M.P.E.P. § 2143.01.

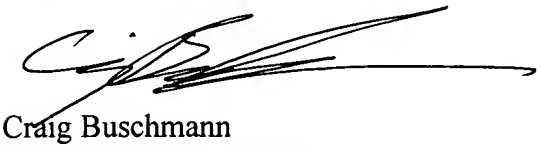
Furthermore, Szuchy teaches away from combining it with Dietrich. Among others, Szuchy notes that "a fiber optic transducer for measuring strain ... has an advantage over a ... electrical transducer in that it is not disturbed by electromagnetic interference at other than optical frequencies." Szuchy, Col. 1, lines 26-29. Continuing, Szuchy states "Fiber optic sensors may also be advantageously formed as an integral portion of fiberglass composite structures," Col. 1, lines 35-36, unlike the electrical sensors of Dietrich. Therefore, one skilled in the art would not be motivated to combine the teachings of Szuchy with Dietrich. M.P.E.P. § 2143.01

Therefore, one skilled in the art would not have a motivation to combine the references in the proposed manner and, thus, the withdrawal of the 35 U.S.C. § 103(a) rejection of claim 37 is respectfully requested.

CONCLUSION

Claims 1-17 and 35-39 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



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